AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the above-identified application.

LISTING OF CLAIMS:

[1] (Currently amended) A light branching optical waveguide, comprising:

at least one incident light waveguide (A) optically connected to one end of a multi-mode optical waveguide; and

output light waveguides (B) larger in number than the at least one incident light waveguide (A), optically connected to the other end thereof,

the light branching optical waveguide being characterized in that:

an intensity distribution of light entering from at least one optical waveguide (a), out of the at least one incident light waveguide (A), into the multi-mode optical waveguide at a connecting surface of the at least one incident light waveguide (A) and the multi-mode optical waveguide, is asymmetric with respect to a geometrical central axis of the at least one optical waveguide (a), the at least one optical waveguide (a) having a curved structure; and

an extended line of the geometrical central axis of the at least one optical waveguide (a) does not coincide with a geometrical central axis of the multi-mode optical waveguide.

[2] (Currently amended) A light branching optical waveguide, comprising:

at least one incident light waveguide (A) optically connected to one end of a multi-mode optical waveguide; and

output light waveguides (B) larger in number than the at least one incident light waveguide (A), optically connected to the other end thereof,

the light branching optical waveguide being characterized in that:

an intensity distribution of light entering from at least one optical waveguide (a), out of the at least one incident light waveguide (A), into the multi-mode optical waveguide at a connecting surface of the at least one incident light waveguide (A) and the multi-mode optical waveguide, is asymmetric with respect to a geometrical central axis of the at least one optical waveguide (a), the at least one optical waveguide (a) having a curved structure; and

a core shape of the multi-mode optical waveguide is asymmetric with respect to a geometrical central axis of the multi-mode optical waveguide.

[3] (Currently amended) A light branching optical waveguide according to claim 2, wherein an extended line of the geometrical central axis of the at least one optical waveguide (a) does not coincide with the geometrical central axis of the multi-mode optical waveguide.

[4] (Currently amended) A light branching optical waveguide according to claim 1, characterized in that an optical central axis having a peak intensity in the intensity distribution of light entering into the multi-mode optical waveguide from the at least one optical waveguide (a) substantially coincides with the geometrical central axis of the multi-mode optical waveguide.

[5] (Previously presented) A light branching optical waveguide according to claim 2, wherein the core shape of the multi-mode optical waveguide has a notch at at least one of its side edges.

[6] (Currently amended) A light branching optical waveguide according to claim 5, wherein:

the notch is obtained by cutting out a core of the multi-mode optical waveguide from a side to be connected to the at least one incident light waveguide (A) to a side edge of the core; and

a shape of the notch has a sinusoidal curve ranging from the side to be connected to the at least one incident light waveguide (A) to a side to be connected to the output light waveguides (B).

[7] (Currently amended) A light branching optical waveguide according to claim 1, wherein:

the at least one incident light waveguide (A) comprises one incident light waveguide;

the output light waveguides (B) comprise two or more output light waveguides; and

a branching ratio between quantities of light branched into the two or more respective output light waveguides is substantially equal.

[8] (Currently amended) A light branching optical waveguide according to claim 1, wherein at least one of the at least one incident light waveguide (A) or the output light waveguides (B) comprises a single-mode optical waveguide.

[9] (Previously presented) A light branching optical waveguide according to claim 1, wherein at least one of the core or a clad constituting the multi-mode optical waveguide is composed of a polymer partially or entirely.

[10] (Original) A light branching optical waveguide according to claim 9, wherein the polymer comprises a polyimide-based resin containing fluorine.

[11] (Previously presented) An optical device comprising the light branching optical waveguide according to claim 1.

[12] (Currently amended) A light branching optical waveguide according to claim 2, characterized in that an optical central axis having a peak intensity in the intensity distribution of light entering into the multi-mode optical waveguide from the at least one optical waveguide (a) substantially coincides with the geometrical central axis of the multi-mode optical waveguide.

[13] (Previously presented) A light branching optical waveguide according to claim 12, wherein the core shape of the multi-mode optical waveguide has a notch at at least one of its side edges.

[14] (Currently amended) A light branching optical waveguide according to claim 13, wherein:

the notch is obtained by cutting out a core of the multi-mode optical waveguide from a side to be connected to the at least one incident light waveguide (A) to a side edge of the core; and

a shape of the notch has a sinusoidal curve ranging from the side to be connected to the at least one incident light waveguide (A) to a side to be connected to the output light waveguides (B).

[15] (Currently amended) A light branching optical waveguide according to claim 2, wherein:

the at least one incident light waveguide (A) comprises one incident light waveguide;

the output light waveguides (B) comprise two or more output light waveguides; and

a branching ratio between quantities of light branched into the two or more respective output light waveguides is substantially equal.

[16] (Currently amended) A light branching optical waveguide according to claim 2, wherein at least one of the at least one incident light waveguide (A) or the output light waveguides (B) comprises a single-mode optical waveguide.

[17] (Previously presented) A light branching optical waveguide according to claim 2, wherein at least one of the core or a clad constituting the multi-mode optical waveguide is composed of a polymer partially or entirely.

[18] (Previously presented) An optical device comprising the light branching optical waveguide according to claim 2.

[19] (New) A light branching optical waveguide according to claim 1, wherein an offset distance between the extended line of the geometrical central axis of the at least one optical waveguide (a) and the geometrical central axis of the multi-mode optical waveguide is 1.5 μm or less.

[20] (New) A light branching optical waveguide according to claim 1, wherein said offset distance is 0.7 μm or less.

[21] (New) A method of manufacturing a light branching optical waveguide, having at least one incident light waveguide (A), optically connected to one end of a multi-mode optical waveguide, and output light waveguides (B) larger in number than the number of incident light waveguides (A), optically connected to the other end of the multi-mode optical waveguide, the at least one incident light waveguide (A) including at least one optical waveguide (a) having an intensity distribution of light entering the multi-mode optical waveguide therefrom that is asymmetric with respect to a geometrical central axis of the at least one optical waveguide (a), comprising the step of:

positioning the at least one optical waveguide (a) such that an extended line of the geometrical central axis of the at least one optical waveguide (a) does not coincide with a geometrical central axis of the multi-mode optical waveguide.

[22] (New) The method according to claim 21, wherein said at least one optical waveguide (a) is a curved optical waveguide.

[23] (New) The method according to claim 22, wherein the at least one incident light waveguide (A) is one incident light waveguide (A), the at least one optical waveguide (a) is one optical waveguide (a), and the output light waveguides (B) are at least two in number.

[24] (New) The method according to claim 21, wherein the at least one incident light waveguide (A) is one incident light waveguide (A), the at least one optical waveguide (a) is one optical waveguide (a), and the output light waveguides (B) are at least two in number.

[25] (New) A method of manufacturing a light branching optical waveguide, having at least one incident light waveguide (A), optically connected to one end of a multi-mode optical waveguide, and output light waveguides (B) larger in number than the number of incident light waveguides (A), optically connected to the other end of the multi-mode optical waveguide, the at least one incident light waveguide (A) including at least one optical waveguide (a) having an intensity distribution of light entering the multi-mode optical waveguide therefrom that is asymmetric with respect to a geometrical central axis of the at least one optical waveguide (a), comprising the step of:

forming a core shape of the multi-mode optical waveguide to be asymmetric with respect to a geometrical central axis of the multi-mode optical waveguide.

[26] (New) The method according to claim 25, wherein said at least one optical waveguide (a) is a curved optical waveguide.

[27] (New) The method according to claim 26, wherein the at least one incident light waveguide (A) is one incident light waveguide (A), the at least one optical waveguide (a) is one optical waveguide (a), and the output light waveguides (B) are at least two in number.

[28] (New) The method according to claim 25, wherein the at least one incident light waveguide (A) is one incident light waveguide (A), the at least one optical waveguide (a) is one optical waveguide (a), and the output light waveguides (B) are at least two in number.